

## **REMARKS**

The foregoing amendments and the remarks that follow are meant to impart precision to the claims, and more particularly point out the claimed subject matter, rather than to avoid prior art.

Claims 1-160 are pending in the application. Claims 46-58 and 140 were previously elected in a Response dated March 2, 2011 to a Restriction Requirement mailed February 2, 2011, and Claims 1-45, 59-139 and 141-160, are hereby cancelled, without prejudice, leaving Claims 46-58 and 140 for prosecution. Claims 46-58 and 140 were rejected. Claim 46 is an independent claim. Claims 46, 58 and 140 have been amended to more particularly point out and distinctly claim the subject matter of the above captioned patent application. No new matter has been added, the recitations added to independent claims being supported at least by para. [0131]-[0137], referencing the corresponding U.S. Pat. App. Pub. No. 2008/0012850, published on January 17, 2008.

### **35 U.S.C. §112 Rejections**

Claims 46 and 58 have been rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Claims 46 and 58 have been amended for clarification. It is, therefore, respectfully submitted that these rejections have been overcome.

### **35 U.S.C. §102 (b) Rejections**

Claims 46-48, 50-52 and 54-58 have been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Pat. App. Pub. No. 2002/0123680 ("Vaillant"), published on September 5, 2002.

The Cited Art Fails to Disclose, Teach or Suggest: "projecting a virtual calibration pattern in the field of view of the object in relation to the optical apparatus in the first position and in the second position"

Independent Claim 46, as amended, recites, *inter alia*, “projecting a virtual calibration pattern in the field of view of the object in relation to the optical apparatus in the first position and in the second position.”

Vaillant fails to disclose, teach or suggest “projecting a virtual calibration pattern in the field of view of the object in relation to the optical apparatus in the first position and in the second position.”

Vaillant discloses a system and method where calibration is done by placing a “known geometric phantom” in the vicinity of where the imaging is later to occur and using that “known geometric phantom” to calibrate where the subsequent positioning of voxels will be in the subsequently taken image. (Vaillant, paras. [0039] and [0042]) More specifically, Vaillant notes the:

form of geometric calibration phantom often used is that of a cube with eight corners at which metal balls opaque to X-rays [the imaging radiation] are placed.

As such, Vaillant is no more than another example of the prior art in which “real objects [are] moved through all the calibration points of the target space {where imaging is subsequently to occur}.” (Specification, para. [0010])

Such calibration as this is shown in the U.S. Patent No. 6,822,748, to Johnston et al., cited in that paragraph of the Specification in the present case. (Johnston, et al. Col. 13, lines 13-34 (use of a physical “monument” of defined shape and size in the target area to pre-calibrate).

Thus, Vaillant fails to disclose, teach or suggest the claimed “projecting a virtual calibration pattern in the field of view of the object in relation to the optical apparatus in the first position and in the second position.” Placing a physical object in the imaging area before imaging is not “projecting a virtual calibration pattern in the field of view of the object in relation to the optical apparatus in the first position and in the second position.”

The Cited Art Fails to Disclose, Teach or Suggest: “capturing an optical image of the object together with an optical image of the virtual calibration pattern from the first position and from the second position”

Independent Claim 46, as amended, recites, *inter alia*, “capturing an optical image of the object together with an optical image of the virtual calibration pattern from the first position and from the second position.”

Vaillant fails to disclose, teach or suggest “projecting a virtual calibration pattern in the field of view of the object in relation to the optical apparatus in the first position and in the second position.”

As noted above, Vaillant pre-calibrates with a “known” phantom real object and therefore, neither captures an optical image of the virtual calibration pattern as claimed nor captures that image “together with the optical image of the object.” Vaillant uses an optical image of a known phantom real object to calibrate where voxels will be in a subsequently taken image of the object to be imaged.

For the above stated reasons, Vaillant cannot anticipate independent Claim 46. Not all of the elements of the claimed subject matter of independent Claim 46 are found in Vaillant.

The Examiner is, therefore, respectfully requested to withdraw the rejections of independent Claim 46 and allow Claim 46.

Dependent Claims 47, 48, 50-52 and 54-58 depend from allowable independent Claim 46 and are allowable for that reason. (*In re Fine*, 837 F. 2d 1071, 5 U.S.P.Q. 2d 1596 (Fed. Cir. 1988)) The Examiner is, therefore, respectfully requested to withdraw the rejections of dependent Claims 47, 48, 50-52 and 54-58 and allow Claims 47, 48, 50-52 and 54-58.

### **35 U.S.C. §103 (a) Rejections**

Claims 49, 53 and 140 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Vaillant in view of U.S. Pat. App. Pub. No. 2002/0036779 (“AlKiyoi”).

Dependent Claims 49, 53 and 140 depend from allowable independent Claim 46 and are allowable for that reason. (*In re Fine*, 837 F. 2d 1071, 5 U.S.P.Q. 2d 1596 (Fed. Cir. 1988)) The Examiner is, therefore, respectfully requested to withdraw the rejections of dependent Claims 49, 53 and 140 and allow Claims 49, 53 and 140.

Accordingly, independent Claim 46 is patentable. The dependent claims are patentable both by their dependence on a patentable independent claim and in their own right. While all of the Examiner's rejections are respectfully traversed, it is submitted that the foregoing reasons are sufficient to demonstrate the patentability of the pending claims without addressing any remaining rejections.

### **CONCLUSION**

It is respectfully submitted that all of the Examiner's rejections and objections have been successfully traversed and that the application is now in order for allowance of Claims 46-58 and 140. Accordingly, reconsideration of the application and prompt allowance thereof is courteously solicited.

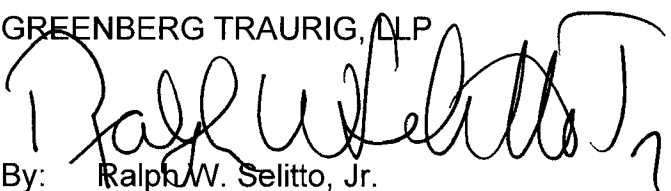
Additional characteristics or arguments may exist that distinguish the claims over the prior art cited by the Examiner, and the right is respectfully preserved to present these in the future, should they be necessary.

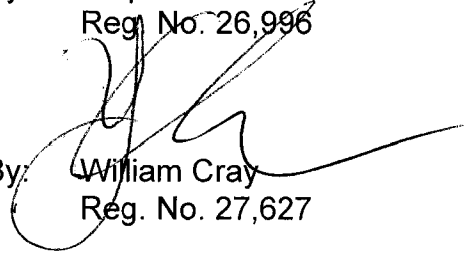
In the event that the Examiner is of the opinion that a brief telephone or personal interview will facilitate allowance of one or more of the above claims, or address any new issues raised by the filing of this Amendment, or if, for some reason, this Amendment cannot be entered, the Examiner is respectfully requested to contact the undersigned attorney at the telephone number given below.

The Commissioner is hereby authorized to charge the Deposit Account of the undersigned attorney for the three month extension of time. It is not believed that any further charges or fees are due in respect of this Amendment. Should any such additional fees or charges be due, authorization is hereby given to charge the Deposit Account No. 501561 of the undersigned attorney for any additional charges or fees that may be due, or to credit any surplus. Furthermore, if an extension is required, then such an extension is hereby requested.

Respectfully submitted,

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